IN THE CLAIMS

1. (Currently Amended) A method of inhibiting mucus secretion by a mucus-secreting cell, comprising administering to said cell a mucus-inhibitory amount of ~~a compound~~ an active fragment of a MARCKS protein that inhibits MARCKS protein-related mucus secretion, wherein said fragment has a sequence comprising from 10 to 50 contiguous amino acids from SEQ ID NO: 3, or an amino acid sequence which is 95% identical to said sequence, and whereby mucus secretion by said cell is reduced compared to that which would occur in the absence of said ~~compound~~ active fragment.

2-5. (Canceled).

6. (Currently Amended) A method according to claim 1 wherein said method further comprises administering a compound ~~is~~ selected from the group consisting of okadaic acid, calphostin C, Rp-8-Br-cGMP and LY83583.

7. (Original) A method according to claim 1 wherein said mucus-secreting cell is an epithelial cell contained within airway mucous membranes or gastrointestinal mucous membranes.

8. (Original) A method according to claim 1, wherein said compound is administered to the airways of a mammalian subject.

9. (Original) A method according to claim 1, wherein said compound is administered to the gastrointestinal tract of a mammalian subject.

10. (Original) A method according to claim 1 wherein said compound is administered by inhalation.

11. (Currently Amended) A method of inhibiting mucus secretion by a mucus-secreting cell, comprising administering to said cell a peptide inhibitor of

MARCKS-related mucus secretion, wherein said peptide inhibitor is selected from the group consisting of

(a) SEQ ID NO: 1;

(b) an active fragment of a MARCKS protein comprising from 10 to 50 contiguous amino acids from SEQ ID NO:3; and

(c) an amino acid sequence which is 95% identical to (a) or (b), such that mucus secretion by said cell is inhibited compared to that which would occur in the absence of said peptide.

12-13. (Canceled).

14. (Original) A method according to claim 11 wherein said mucus-secreting cell is an epithelial cell contained within airway mucous membranes or gastrointestinal mucous membranes.

15. (Original) A method according to claim 11, wherein said peptide is administered to the airways of a mammalian subject.

16. (Original) A method according to claim 11, wherein said peptide is administered to the gastrointestinal tract of a mammalian subject.

17. (Original) A method according to claim 15 wherein said peptide is administered by inhalation.

18. (Currently Amended) A method of inhibiting mucus secretion in the airways of a subject in need of such treatment, comprising administering to the airways of said subject a mucus-inhibiting amount of a compound that inhibits the MARCKS-related release of mucin, wherein said compound is selected from the group consisting of

(a) SEQ ID NO: 1;

(b) an active fragment of a MARCKS protein comprising from 10 to 50 contiguous amino acids from SEQ ID NO:3;

(c) an amino acid sequence which is 95% identical to (a) or (b); and whereby mucus secretion in the airways of the subject is reduced compared to that which would occur in the absence of said treatment.

19. (Original) A method according to claim 18 wherein said subject is a mammalian subject suffering from a condition selected from the group consisting of bronchitis, asthma, cystic fibrosis, chronic obstructive pulmonary disease, emphysema, pneumonia, influenza, rhinitis and the common cold.

20-23. (Canceled).

24. (Original) A method according to claim 18, further comprising administering a ~~wherein said~~ compound ~~is~~ selected from the group consisting of okadaic acid, calphostin C, Rp-8-Br-cGMP) and LY83583.

25. (Original) A method according to claim 18 wherein said compound is administered by inhalation.

26-38 (Cancelled).

39. (Currently Amended) A pharmaceutical formulation comprising a mucus-inhibiting peptide fragment of MARCKS, wherein said mucus-inhibiting peptide fragment is selected from the group consisting of

(a) SEQ ID NO: 1;

(b) an active fragment of a MARCKS protein comprising from 10 to 50 contiguous amino acids from SEQ ID NO:3; and

(c) an amino acid sequence which is 95% identical to (a) or (b); and

a pharmaceutically acceptable carrier.

40-41. (Canceled).

42. (Original) A pharmaceutical formulation according to claim 39 where said composition is aerosolized.

43. (Original) A pharmaceutical formulation according to claim 39 where said peptides are contained within liposomes.

44-47. (Canceled).

48. (Currently Amended) A method of inhibiting mucus secretion by a mucus-secreting cell, comprising administering to said cell a mucus-inhibitory amount of a compound, wherein said compound is a peptide having an amino acid sequence that comprises from 10 to 50 contiguous amino acids from an N-terminal sequence of a MARCKS protein or an amino acid which is 95% identical to said sequence that binds to a target site selected from:

(a) mucin granule membranes at the site bound by MARCKS protein; and

(b) MARCKS protein at the mucin granule binding site;

wherein the amount of mucus secreted by said cell is reduced compared to that which would occur in the absence of said compound.

49. (Canceled).

50. (Currently Amended) A method according to claim ~~49~~ 48 where said peptide is myristoylated.

51-66 (Cancelled).

67. (New) The method of Claim 1, wherein the N-terminal region of the active fragment of a MARCKS protein is myristoylated.

68. (New) The method of Claim 1, wherein said active fragment of a MARCKS protein corresponds to the myristoylated N-terminus of MARCKS.

69. (New) The method of Claim 1, wherein said active fragment of a MARCKS protein comprises SEQ ID NO: 1.

70. (New) The method of Claim 18, wherein the N-terminal region of the active fragment of a MARCKS protein is myristoylated.

71. (New) The method of Claim 18, wherein said active fragment of a MARCKS protein corresponds to the myristoylated N-terminus of MARCKS.

72. (New) The method of Claim 39, wherein the N-terminal region of the active fragment of a MARCKS protein is myristoylated.

73. (New) The method of Claim 39, wherein said active fragment of a MARCKS protein corresponds to the myristoylated N-terminus of MARCKS.

74. (New) The method of Claim 48, wherein the N-terminal region of the active fragment of a MARCKS protein is myristoylated.

75. (New) The method of Claim 48, wherein said active fragment of a MARCKS protein corresponds to the myristoylated N-terminus of MARCKS.

76. (New) A method of inhibiting mucus secretion by a mucus-secreting cell, comprising administering to said cell a peptide inhibitor of MARCKS-related mucus secretion, wherein said peptide inhibitor comprises SEQ ID NO: 1.